

AMENDED CLAIMS

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(08/09/04); claims 1-17 replaced by new claims 1-11 (2
5 pages)]

1. A person recognition device having on one base
(20) a scanning fingerprint image sensor (10) which
acquires an image line or a small number of image lines
and has means for reconstructing an overall print image
10 by correlation between partial images obtained during a
relative movement between the finger and the sensor,
characterized in that it also has a sensor (12, 14) for
spectral transmission information relating to the skin
of the finger whose print is recorded by the image
15 sensor, the image sensor and the spectral information
sensor being designed to function alternately.

2. The device as claimed in claim 1, characterized
in that the fingerprint image sensor is located on a
silicon chip and the spectral transmission information
20 sensor has light-emitting diodes and photodiodes.

3. The device as claimed in claim 2, characterized
in that the photodiodes and optionally the light-
emitting diodes are located on the same chip as the
print image sensor.

25 4. The device as claimed in one of claims 2 and 3,
characterized in that the light-emitting diodes and the
photodiodes are arranged symmetrically with respect to
an axis.

5. A person recognition method, characterized in
30 that both a fingerprint image and spectral transmission
information relating to the skin of a finger whose
print is detected are detected using the same device,
which has a scanning print image sensor and a spectral
transmission information sensor, and both the print
35 image and the spectral transmission information are
used for recognizing the person, the image sensor
acquiring an image line or a small number of image

lines and having means for reconstructing an overall print image by correlation between partial images obtained during a relative movement between the finger and the sensor, the print image sensor and the spectral information sensor functioning alternately.

6. The method as claimed in claim 5, characterized in that the full fingerprint is read several times and the full spectral information is collected several times, alternately, and the consistency between the different detected information is checked.

7. The method as claimed in claim 5, characterized in that a part of the fingerprint corresponding to a specific finger sector is read, the spectral information corresponding to this sector is read, and a full image of the print is subsequently reconstructed from the partial images.

8. The method as claimed in claim 7, characterized in that a check is made that the fingerprint corresponding to a finger sector is consistent with the spectral information corresponding to this sector or to another sector for the person who is intended to be recognized.

9. The device as claimed in one of claims 1 to 4, characterized in that the print sensor is an optical or capacitive or thermal sensor or a sensor sensitive to the flow of current through the finger, or a sensor sensitive to pressure.

10. The device as claimed in one of claims 1 to 4, characterized in that the same light source is used both for the fingerprint acquisition and for the spectral information acquisition.

11. The device as claimed in one of claims 1 to 4, characterized in that the spectral information acquisition comprises a measurement at a wavelength used for the detection of blood and/or the oxygen level in hemoglobin.